

Work Order ID 62905



Work Order ID 62905



Page 1

Wednesday, October 13, 2010 9:04:54 AM

Item ID: D350-636-016

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 10/22/2010 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan:

Date: 10-10-10

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D4168

A

IIN-D350-636

H

0.00

100



DC

Document Control

DOCUMENT CONTROL

Memo

0.00

Photocopy blue file and type labels per PPP D350-636-016 CHG 001

5/11/07/07

CK for CR 11/01/06

B62905

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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**NOTE:** Date & initial all entries

H:\FORMS\Quality Assurance\approved QA\NCRWO RevE

**NOTE:** Date & initial all entries

H:\FORMS\Quality Assurance\approved QA\NCRWO RevE

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Date:

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Run

Start

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160



Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side)  
as per dwg D4168.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side)  
as per dwg D4168.

3- Open float hole to 0.500" (4 per side)

4-Chamfer holes of Detail K,L, ground handling and float holes per dwg D4168  
(welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6- Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R ☐ ☐ ☐ Sikaflex-291 batch: 116040 ☐ ☐ ☐  
exp. date: 11/09/30

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D4168 & QSI004  
(welding instructions on sheet 8)

A/R ☐ ☐ ☐ Aluminum Rod batch: M115778

9- At section AP-AP drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D4168

BE 10/11/08  
BE 10/11/08  
BE 10/11/09

10-11-5

BB 10/11/08

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Stop

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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190

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME: 1:40  
OVEN TEMPERATURE: 320  
FINISH TIME: 2:10

210

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

Inspect for foreign object per QSI 024

205  
Hand Finishing  
11.01.05

Wing Chik peng

10/01/06

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

220



HandFinish

Hand Finishing

HandFinishing

Memo

1- Install inserts as per Dwg D4168

0.00

=> JH 11/01/04

0.00

1 0

230



HandFinish

Hand Finishing

HandFinishing

Memo

1-Inspect for Foreign Objects

2-Spray inside of tube with "LPS-3" batch: N/A

3-Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D4168

SIKA FLEX 241

BATCH: M115114

EXP DATE: 11/01

0.00

0.00

=> JH 11/01/06

1 0

4-assemble o-ring to plug as per dwg D3492 and apply o-ring lube

A/R 55-o-ring lube batch: M114189

5-Coat all exposed fasteners with "LPS Procyon" batch: M114546

W/O:		WORK ORDER CHANGES					
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Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00

S. 10/13/10

XU



QC

Memo

0.00

Quality Control

250

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

11/16 SP

260

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

\*\*\*\*\*ensure antiseize is on AN8C21A bolts\*\*\*\*\*

S. 10/13/10

XU

W/O:		WORK ORDER CHANGES					
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Required Date: 10/22/2010 Req'd Qty: 1.00

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Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270	Packaging	0.00							
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPPD350-636-016 Location: <u>72</u> PPP rev: <u>12</u>								
280	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

*Handwritten signature* 11/01/10

*Handwritten signature* 11/01/10

*Handwritten text* MF  
11-01-07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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# Picklist Print

Wednesday, October 13, 2010 9:04:59 AM

Page 1

Work Order ID: 62905

Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010


Required Date: 10/22/2010

Start Qty: 1.00


Required Qty: 1.00

Comments: IPP rev:A 10.09.28 new issue DD verf:EC


Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3490-1  Cross Bolt Spacer		Manufactured	No			160	Each	123.0000	4	4			
---	--	--------------	----	--	--	-----	------	----------	---	---	--	--	--

Location	Loc Qty	Loc Code
LG	123	
59424	3	
61217	30	
62450	90	

D3490-3  Cross Bolt Spacer		Manufactured	No			160	Each	39.0000	4	4			
---	--	--------------	----	--	--	-----	------	---------	---	---	--	--	--

Location	Loc Qty	Loc Code
LG	39	
60294	1	
61218	1	
62451	37	

AN3C34A  BOLT		Purchased	No			230	Each	17.0000	1	1			
--	--	-----------	----	--	--	-----	------	---------	---	---	--	--	--

Location	Loc Qty	Loc Code
ST353	17	
115767	17	

4 BE 10/11/08

4 BE 10/11/08

10/10/05

X1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN3C36A

Purchased

No

230

Each

115.0000

4

4



BOLT



11/16/10

Location

Loc Qty

Loc Code

ST353

115

1116239

11/16/10

109771

10

115358

15

115518

40

115882

50

AN3C37A

Purchased

No

230

Each

60.0000

1

1



BOLT



11/15/10

Location

Loc Qty

Loc Code

ST354

60

114761

10

114801

50

AN3C42A

Purchased

No

230

Each

104.0000

1

1



BOLT



11/17/10

Location

Loc Qty

Loc Code

ST354

104

106169

4

106176

100

D3488-042

Manufactured

No

230

Each

8.0000

1

1



Blade Fitting Assembly, RH



11/16/10

Location

Loc Qty

Loc Code

FP008

8

59643

8

11/17/10

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Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3873-1

Manufactured No

230

Each

95.0000

7

7



Bushing



11/01/05

## Location

## Loc Qty

## Loc Code

ST092

40

B63314

X7

62197

40

ST093

55

57615

55

D4154-041

Manufactured No

230

Each

3.0000

1

1



Wearplate Assembly

B62711



X1 M 11/01/05

## Location

## Loc Qty

## Loc Code

FG

3

62196

3

D4170-1

Manufactured No

230

Each

8.0000

4

4



Bushing



## Location

## Loc Qty

## Loc Code

LG

8

62251

8

D4171-1

Manufactured No

230

Each

0.0000

1

1



Bushing

B62710



X1 M 11/01/06

B62609 (4) BE 10/1/08

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Start Date: 10/13/2010

Required Date: 10/22/2010


Start Qty: 1.00

Required Qty: 1.00

MS21043-3 Purchased No 230 Each 2,564.000 5 5  
  11/01/06

Nut

Location	Loc Qty	Loc Code
FG	76	
103691	76	
ST301	2488	
111383	23	
<u>112314</u>	2465	

NAS1149C0363R Purchased No 230 Each 5,796.000 9 9  
  11/01/06

Washer

Location	Loc Qty	Loc Code
ST297	5796	
113524	146	
<u>113644</u>	150	
113889	500	
114742	5000	

NAS1515H3L Purchased No 230 Each 380.0000 4 4  
  11/01/05

WASHER

Location	Loc Qty	Loc Code
FG	40	
102472	40	
ST277	340	
<u>111819</u>	94	
113362	246	

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Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN960JD816

Purchased No

250

Each

127.0000

2



1/2" washer, Alum



2  
10/1/10 SP

Location

Loc Qty

Loc Code

ST348

127

106043

127

2

D2744

Manufactured No

110

Each

14.0000

1



Cap



1

Location

Loc Qty

Loc Code

LG

14

59198

14

1

BE 10/14/14

D2600-3-BENT

Manufactured No

110

Each

17.0000

1



Extrusion Bent



1

Location

Loc Qty

Loc Code

LG

17

61634

7

62594

10

1

BB 10/10/14

D2743

Manufactured No

160

Each

214.0000

8



Crossbolt Spacer



8

Location

Loc Qty

Loc Code

LG

214

50281

10

57953

2

59111

95

61844

107

8

BE 10/14/04

D2739

Manufactured No

160

Each

0.0000

1



350 I Beam



1

BB 10/14/05

62600

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Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

Purchased

No

230

Each

4,870.000

4

4



Insert



HL 11/01/05

## Location

## Loc Qty

## Loc Code

PK011

4870

110768

4870

X4

D3492-041

Manufactured

No

230

Each

17.0000

8

8



Plug Assembly



HL 11/01/05 PTO = 7

## Location

## Loc Qty

## Loc Code

FP013

17

59114

1

61311

16

X8

AN8C35A

Purchased

No

230

Each

30.0000

1

1



BOLT



HL 11/01/05

## Location

## Loc Qty

## Loc Code

FP

1

110847

1

ST346

29

114442

5

115188

24

X1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11/01/05	230	Assemble with "D2593-3 / 1161762" o-rings	M	11/01/05	x8		8 11/1/06

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Wednesday, October 13, 2010 9:04:59 AM

Page 7

Work Order ID: 62905

Parent Item: D350-636-016


Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010


Required Date: 10/22/2010

Start Qty: 1.00


Required Qty: 1.00

AN6C44A Purchased No 230 Each 85.0000 4 4  
  
 BOLT

Location	Loc Qty	Loc Code
FG	2	
103964	2	
ST344	83	
111649	2	
114653	1	
114941	75	
115030	5	

MS21083C8 Purchased No 230 Each 99.0000 1 1  
  
 NUT

Location	Loc Qty	Loc Code
ST303	99	M116289
113845	5	
114934	3	
115594	41	
115884	50	

D3631-1 Manufactured No 230 Each 387.0000 8 8  
  
 Washer

Location	Loc Qty	Loc Code
ST072	113	
60755	113	
ST076	274	B63647
52693	206	
54388	68	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, October 13, 2010 9:04:59 AM

Page 8

10

Work Order ID: 62905

Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C10L NAS1149C0332 Purchased No

230

Each

29.0000

4

4



washer



yl 11/01/05

## Location

## Loc Qty

## Loc Code

ST245

29

107534

29

1115832

yl

D2745 Manufactured No

230

Each

189.0000

8

8



Bushing



yl 11/01/05

## Location

## Loc Qty

## Loc Code

ST023

189

52311

5

59112

4

61203

76

61988

104

v8

AN960C816L NAS1149C0882 R Purchased No

230

Each

0.0000

1

1



WASHER

1114915



yl 11/01/05

D3492-043 Manufactured No

230

Each

35.0000

8

8



Plug Assembly



yl 11/01/05 PTO =>

## Location

## Loc Qty

## Loc Code

FP

2

54682

2

FP013

33

1363996

v8

59117

1

59190

4

61842

28

Wednesday, October 13, 2010 9:04:59 AM

Shop Packet Print

Page 8

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11/01/05	230	Assemble with NAS1611-013 / M115812 "O" Rings	JH	11/01/05	KE		JH 11/01/05

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, October 13, 2010 9:04:59 AM

Page 9

Work Order ID: 62905

Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN3C6A Purchased No 230 Each 261.0000 4 4  
BOLT

Location

Loc Qty

Loc Code

ST351

261

111982

261

MS21043-6 Purchased No 230 Each 634.0000 4 4  
NUT

Location

Loc Qty

Loc Code

ST301

634

112314

634

D3493-1 Manufactured No 250 Each 44.0000 2 2  
Washer

Location

Loc Qty

Loc Code

ST062

40

61672

40

ST065

4

60873

4

MS21083C8 Purchased No 250 Each 99.0000 1 2  
NUT

Location

Loc Qty

Loc Code

ST303

99

113845

5

114934

3

115594

41

115884

50

*Remake  
in stock*

Wednesday, October 13, 2010 9:04:59 AM

Shop Packet Print

Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, October 13, 2010 9:04:59 AM

Page 10

Work Order ID: 62905

Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN8C21A

Purchased

No

250

Each

53.0000

-2



BOLT



11/1/10 sp

Location

Loc Qty

Loc Code

ST345

53

113558

1

114653

12

115723

40

2

D2741

Manufactured

No

250

Each

35.0000

1



Blade, 350 Skidtube



10/11/10 sp

Location

Loc Qty

Loc Code

ST466

35

60210

35

1

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D4168-041	350 SKIDTUBE ASSEMBLY, LH
	X			D4168-042	350 SKIDTUBE ASSEMBLY, RH
		X		D4168-043	350 SKIDTUBE ASSEMBLY, LH
			X	D4168-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
8	8	8	8	D3631-1	WASHER
7	7	7	7	D3873-1	BUSHING
1	1	1	1	D4154-041	WEARPLATE ASSEMBLY
1				D4168-1	SKIDTUBE WELDMENT, LH
	1			D4168-2	SKIDTUBE WELDMENT, RH
		1		D4168-3	SKIDTUBE WELDMENT, LH
			1	D4168-4	SKIDTUBE WELDMENT, RH
4	4	4	4	D4170-1	SPACER
1	1	1	1	D4171-1	BUSHING
4	4	4	4	ALS4-1032-225	INSERT
4	4	4	4	AN3C6A	BOLT
1	1	1	1	AN3C34A	BOLT
4	4	4	4	AN3C36A	BOLT
4	4	4	4	AN8C44A	BOLT
1	1	1	1	AN8C35A	BOLT
9	9	9	9	AN960C10	WASHER (OR NAS1149CO363R)
4	4	4	4	AN960C10L	WASHER (OR NAS1149CO332R)
1	1	1	1	AN960C816L	WASHER (OR NAS1149CO832R)
5	5	5	5	MS21043-3	NUT
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

# GENERAL NOTES:

- MATERIAL: MAKE D4168-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:  
CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.  
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D4168-041/-042/-043/-044 = 32.3 LBS
- WELD PER DART QSI 004
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:  
MINIMUM YIELD TENSILE STRENGTH = 35 KSI  
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF  
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

SKIDTUBE  
R  
E  
UNCONT  
SUBMIT  
W/...  
NO. 62905  
10-10-13

RELEASED  
2010-09-15

A NEW ISSUE		SC	10.08.09
REV.	DESCRIPTION	BY	DATE
DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4168	SHEET 1 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	10.08.09	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

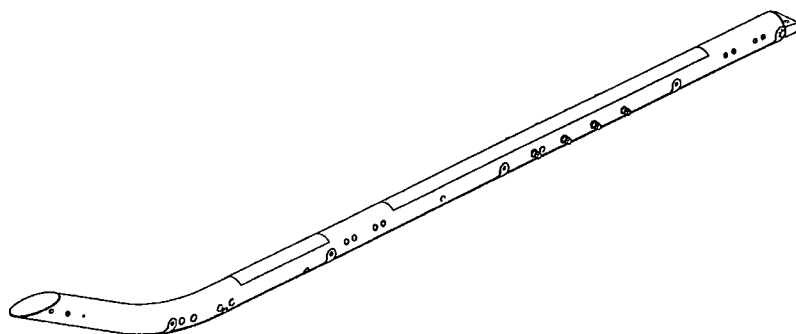
# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

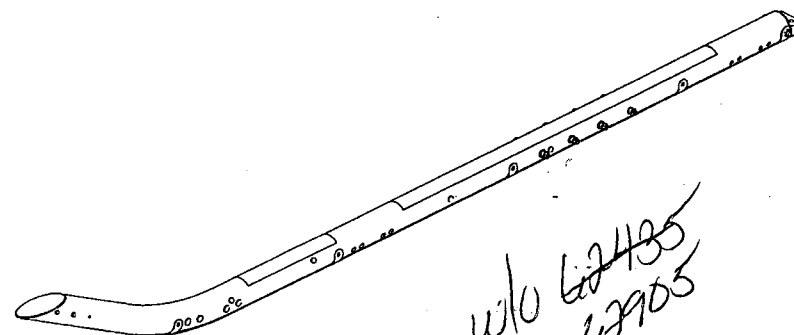
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 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**D4168-041 350 SKIDTUBE ASSEMBLY, LH**



**D4168-042 350 SKIDTUBE ASSEMBLY, RH**

**RELEASED**  
2010-09-15  
JW

DESIGN	SC	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED	SC	DRAWING NO. <b>D4168</b>	REV. A
MFG. APPR.			SHEET 2 OF 11
APPROVED		TITLE	SCALE
DE APPR.		<b>350 SKIDTUBE ASSEMBLY</b>	NTS
DATE	<b>10.08.09</b>	<small>COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESSED CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

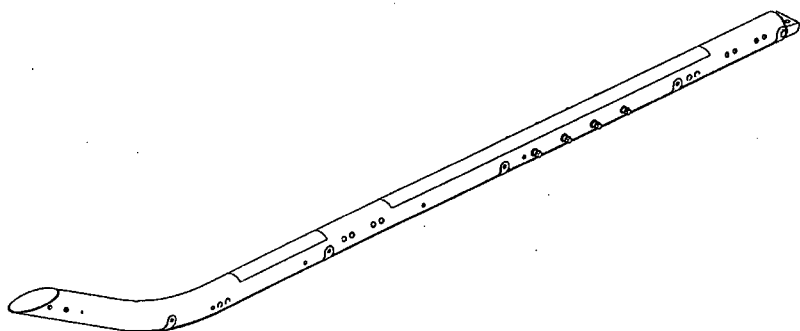
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

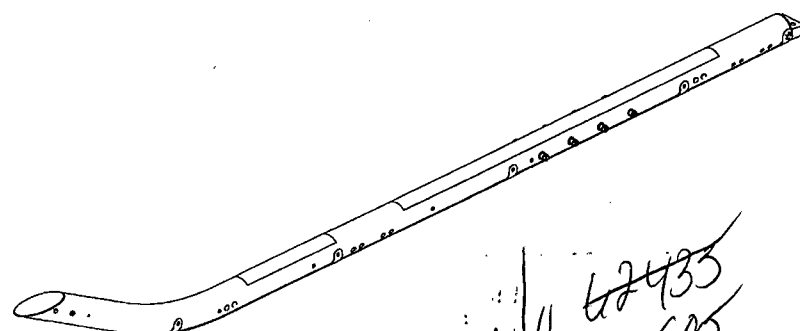
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**D4168-043 350 SKIDTUBE ASSEMBLY, LH**



**D4168-044 350 SKIDTUBE ASSEMBLY, RH**

*WLO 62433  
62905*

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2010-09-15

DESIGN	SC	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	D4168	SHEET 3 OF 11
APPROVED	<i>[Signature]</i>	TITLE	SCALE
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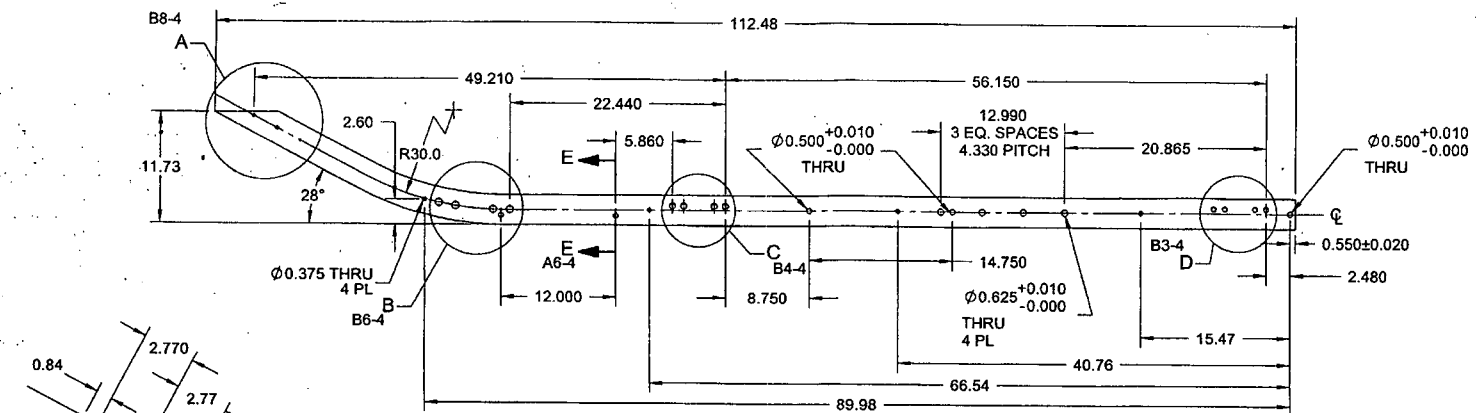
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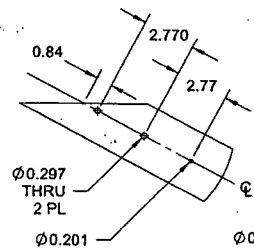
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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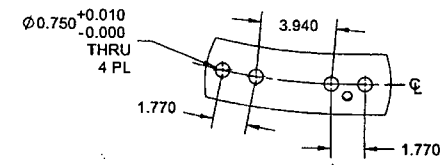
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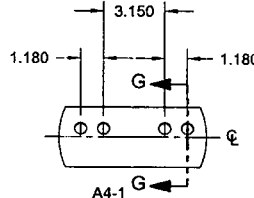
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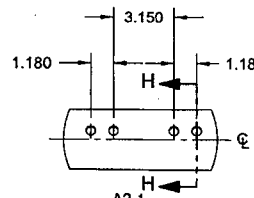
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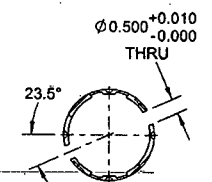
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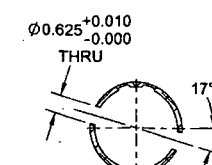
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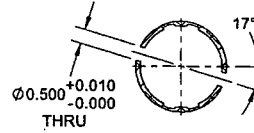
**DETAIL D**  
SCALE 2X



**SECTION E-E**  
SCALE 3X, 2 PL



**SECTION G-G**  
SCALE 3X, 4 PL



**SECTION H-H**  
SCALE 3X, 4 PL

*w/6 62435  
62985*

**RELEASED**  
2010-09-15

DESIGN	SC	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED		DRAWING NO. <b>D4168</b>	REV. A
MFG. APPR.		SHEET 4 OF 11	
APPROVED		TITLE	SCALE
DE APPR.		<b>350 SKIDTUBE ASSEMBLY</b>	NTS
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8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



8 7 6 5 4 3 2 1

D

D

C

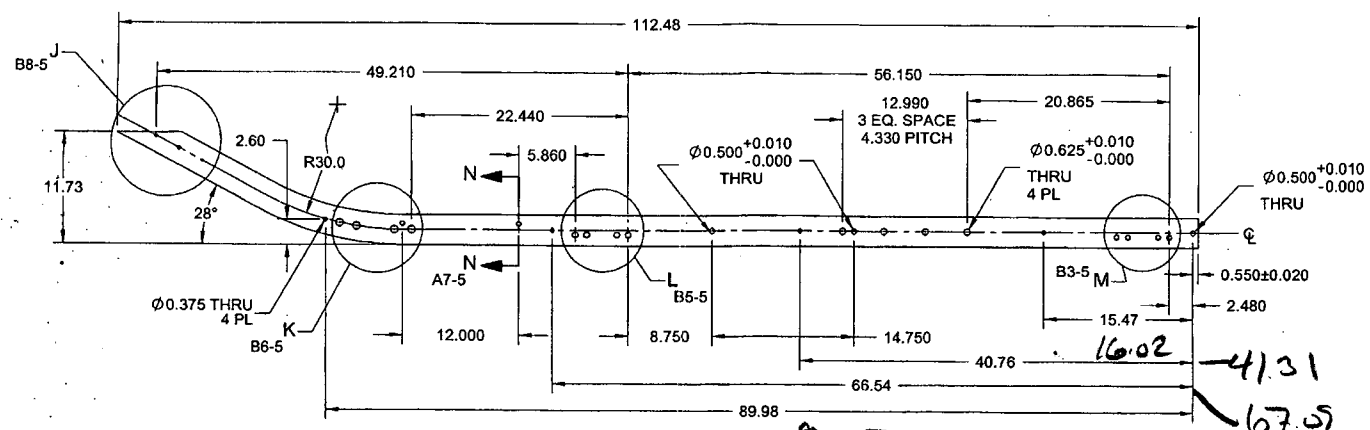
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B

B

A

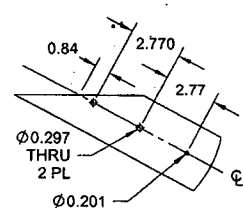
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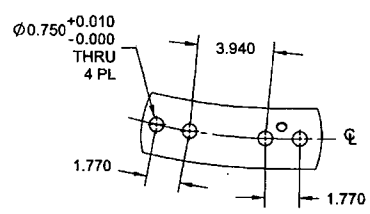
**D4168-2 RH SKIDTUBE**

90.53

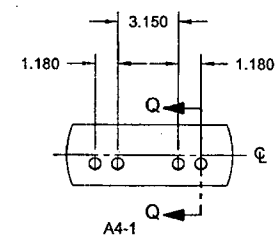
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W2903



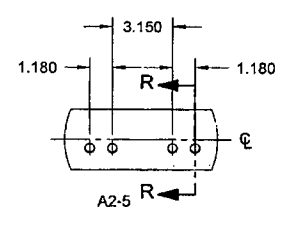
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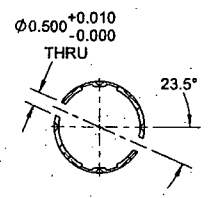
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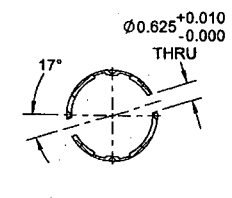
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SCALE 2X



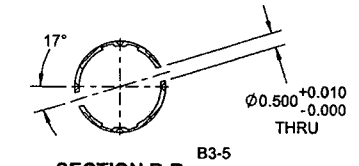
**DETAIL M**  
SCALE 2X



**SECTION N-N**  
SCALE 3X, 2 PL



**SECTION Q-Q**  
SCALE 3X, 4 PL



**SECTION R-R**  
SCALE 3X, 4 PL

DESIGN	SC	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4168	SHEET 5 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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2010-09-15  
MD

8 7 6 5 4 3 2 1

# Dart Aerospace Ltd

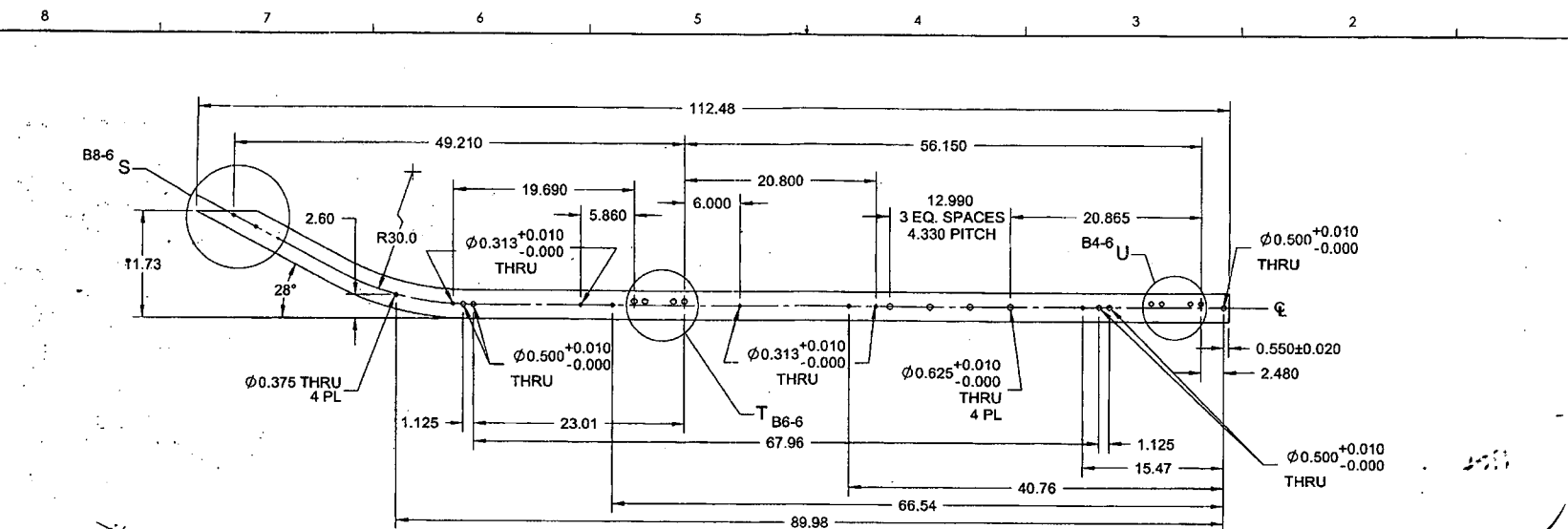
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

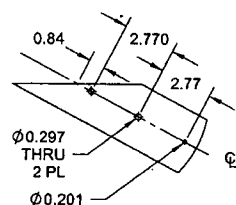
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

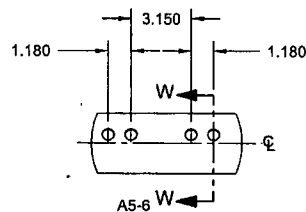
**NOTE:** Date & initial all entries



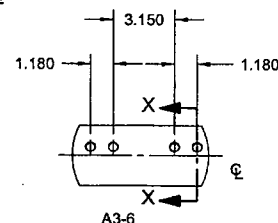
**D4168-3 LH SKIDTUBE**



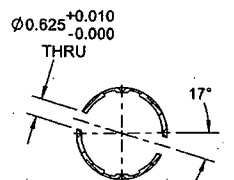
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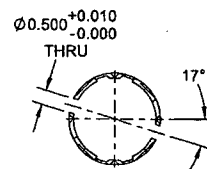
**DETAIL T**  
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**DETAIL U**  
SCALE 2X





**SECTION W-W**  
SCALE 3X, 4 PL



**SECTION X-X**  
SCALE 3X, 4 PL

**RELEASED**  
2010-09-15

DESIGN	SC	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4168	SHEET 6 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	10.08.09	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

8 7 6 5 4 3 2 1

D

C

B

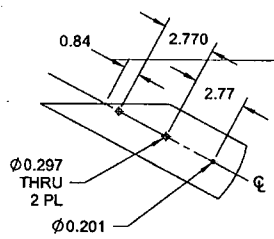
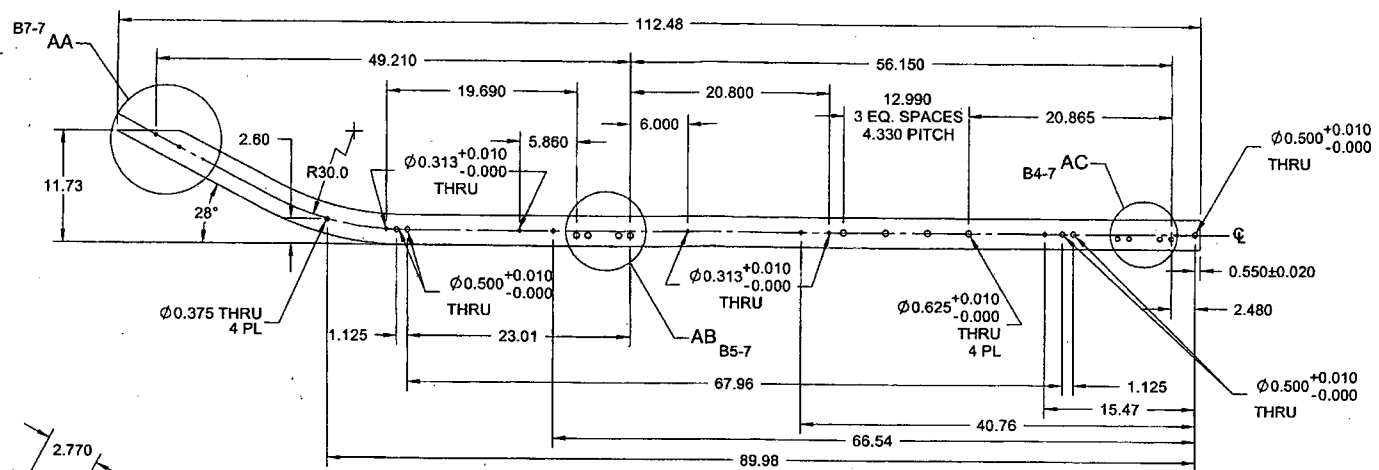
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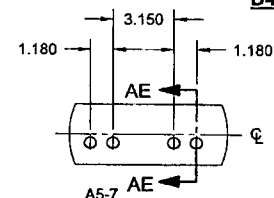
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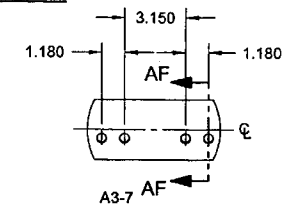
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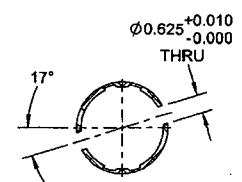
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SCALE 2X  
D7-7



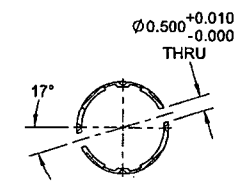
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SCALE 2X  
C4-7



**DETAIL AC**  
SCALE 2X  
D3-7



**SECTION AE-AE**  
SCALE 3X, 4 PL  
B6-7



**SECTION AF-AF**  
SCALE 3X, 4 PL  
B4-7

*w/o 42435  
42905*

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2010-09-15

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CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4168	SHEET 7 OF 11
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8 7 6 5 4 3 2 1

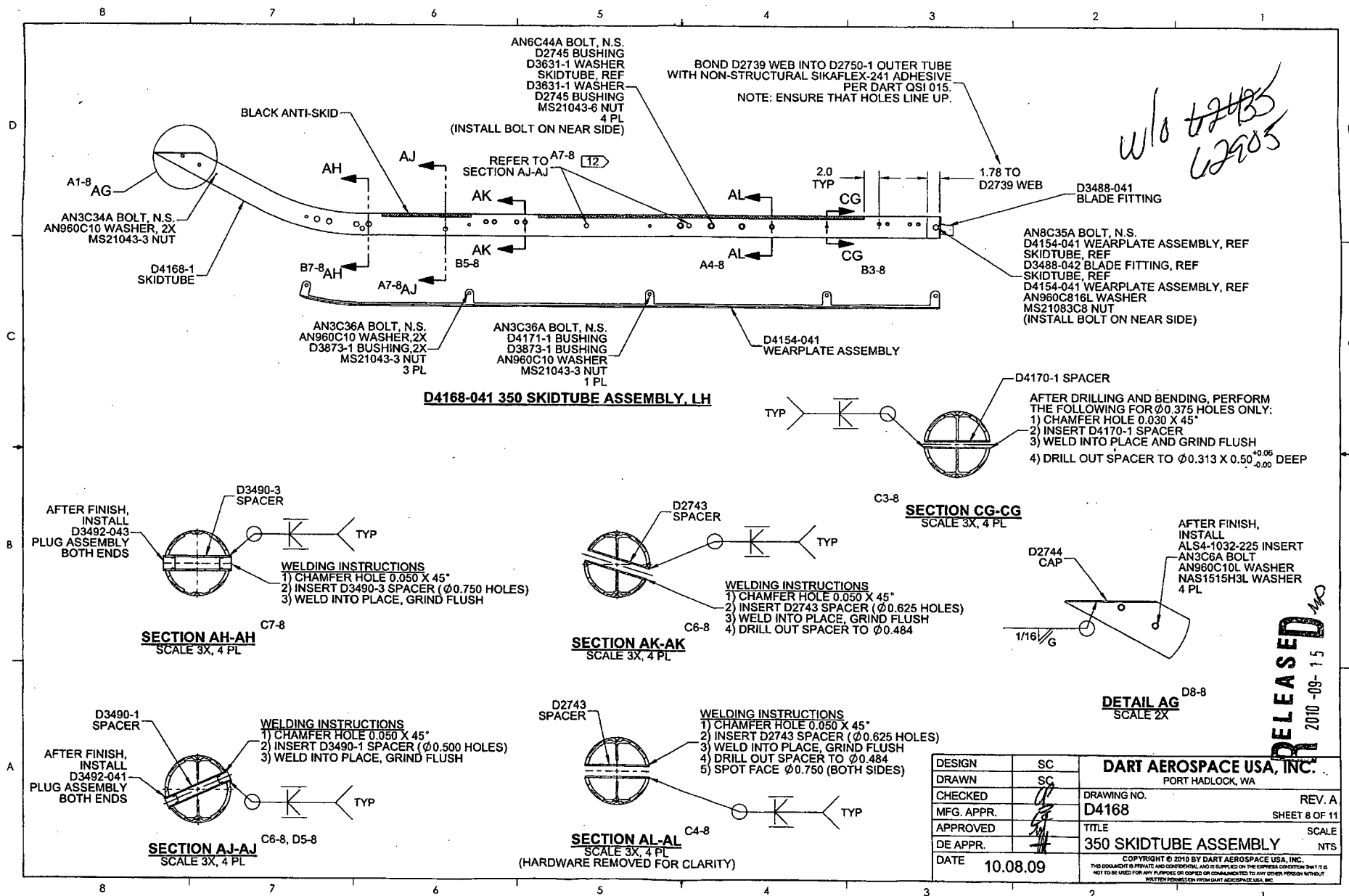
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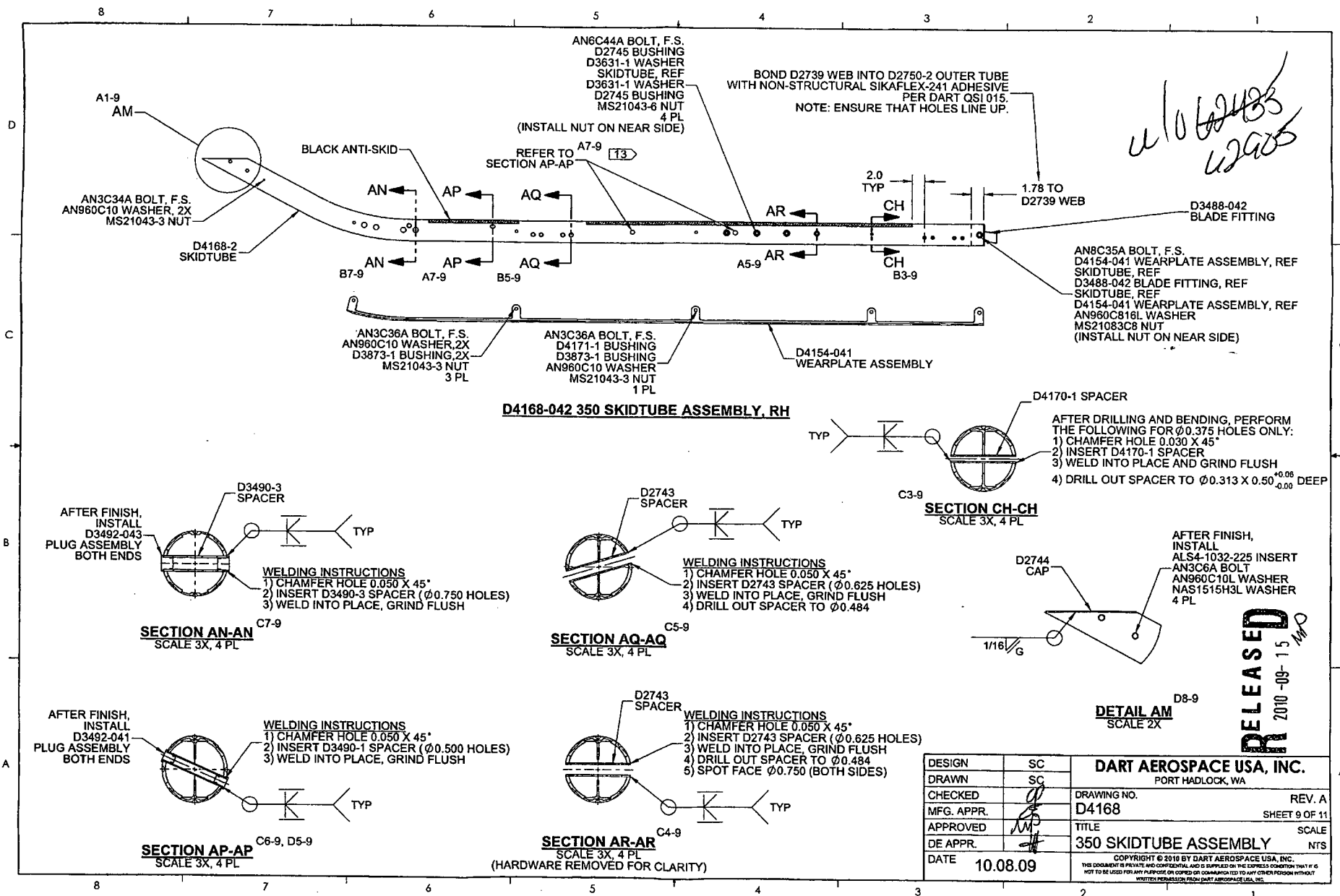
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



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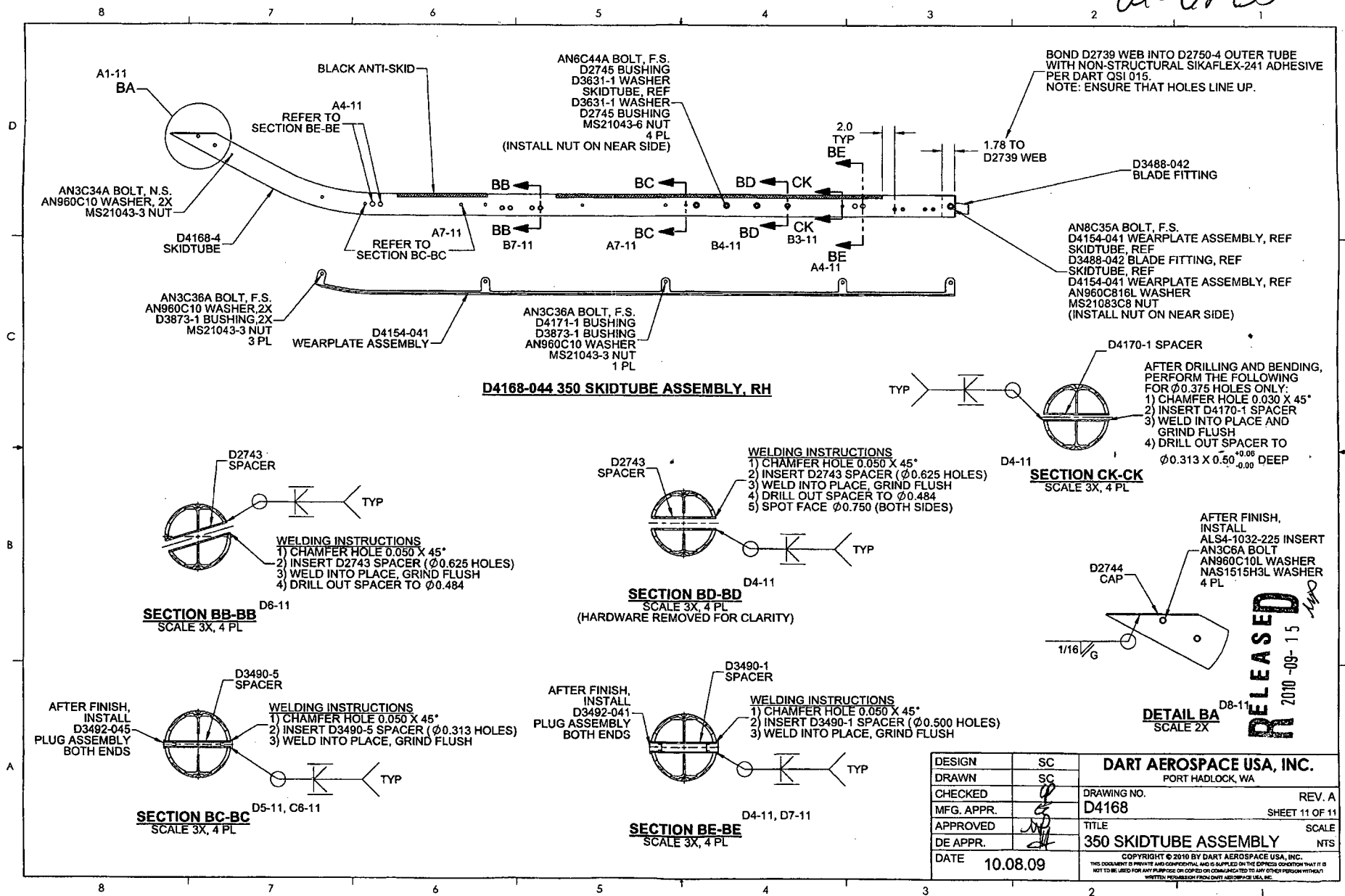
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

406243



RELEASED  
2010-09-15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

NO. 239

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barday Elliott  
Job number: 61946/61914  
Part number: D350.636.012  
Description: 350 skid  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminum  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier P.D. Date of Test Coupon 10.09.30  
Welder Barday Elliott Date of Test Coupon 10.09.30

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

### 8.0 PARTS LIST (D350-636-015/-016/-017/-018/-047 KITS)

Item	Qty -015	Qty -016	Qty -017	Qty -018	Qty -047	Part Number	Description
	X					D350-636-015	SKIDTUBE INSTALLATION, LH, STD AERAZUR/APICAL CYLINDRICAL FLOAT COMPATIBLE W/ TRAINING WEARPLATE
		X				D350-636-016	SKIDTUBE INSTALLATION, RH, STD AERAZUR/APICAL CYLINDRICAL FLOAT COMPATIBLE W/ TRAINING WEARPLATE
			X			D350-636-017	SKIDTUBE INSTALLATION, LH AIRCRAUSER/ APICAL TRI-BAG FLOAT COMPATIBLE W/ TRAINING WEARPLATE
				X		D350-636-018	SKIDTUBE INSTALLATION, RH AIRCRAUSER/ APICAL TRI-BAG FLOAT COMPATIBLE W/ TRAINING WEARPLATE
					X	D350-636-047	TRAINING WEARPLATE KIT (LH/RH)
1	1					D4168-041	SKIDTUBE ASSEMBLY, LH
1		1				D4168-042	SKIDTUBE ASSEMBLY, RH
1			1			D4168-043	SKIDTUBE ASSEMBLY, LH
1				1		D4168-044	SKIDTUBE ASSEMBLY, RH
*1	1					D4168-1	SKIDTUBE WELDMENT, LH
*1		1				D4168-2	SKIDTUBE WELDMENT, RH
*1			1			D4168-3	SKIDTUBE WELDMENT, LH
*1				1		D4168-4	SKIDTUBE WELDMENT, RH
**2	8	8	8	8		350A41-1027-20	SCREW
**3	8	8	8	8		23119AG120LE	WASHER
**4	8	8	8	8		22541N120	NUT
*5	1	1	1	1		AN8C35A	BOLT
*6A	1	1	1	1		AN960C816L	WASHER (OR NAS1149CO832R)
*7	1	1	1	1		MS21083C8	NUT
*8	1		1			D3488-041	BLADE FITTING, LH
*8		1		1		D3488-042	BLADE FITTING, RH
9	1	1	1	1		D2741	BLADE
*10	2	2	2	2		AN8C21A	BOLT
11	2	2	2	2		AN960JD816	WASHER (OR NAS1149CO863J)
12	2	2	2	2		MS21083C8	NUT
*14	4	4	4	4		AN6C44A	BOLT
*15	8	8	8	8		D2745	BUSHING
*16	4	4	4	4		MS21043-6	NUT
*17	8	8	8	8		D3631-1	WASHER
*18	4	4	4	4		ALS4-1032-225	INSERT
*19	4	4	4	4		AN3C6A	BOLT
*20A	4	4	4	4		AN960C10L	WASHER (OR NAS1149CO332R)
*20B	4	4	4	4		NAS1515H3L	WASHER
*30	8	8	8	8		D3492-041	PLUG ASSEMBLY
*31	8	8				D3492-043	PLUG ASSEMBLY
*32			8	8		D3492-045	PLUG ASSEMBLY

(CONTINUED ON NEXT PAGE)



(CONTINUED FROM PREVIOUS PAGE)

Item	Qty -015	Qty -016	Qty -017	Qty -018	Qty -047	Part Number	Description
***43	2	2	2	2		D3493-1	WASHER
*90	1	1	1	1	1	D4154-041	WEARPLATE ASSEMBLY
*91A	4	4	4	4	4	AN3C36A	BOLT <sup>1</sup>
91B	1	1	1	1	1	AN3C37A	BOLT <sup>2</sup>
91C	1	1	1	1	1	AN3C42A	BOLT <sup>3</sup>
*92	7	7	7	7	8	AN960C10	WASHER (OR NAS1149CO363R)
92A			1	1		AN960C10	WASHER (OR NAS1149CO363R) <sup>3</sup>
*93	4	4	4	4	4	MS21043-3	NUT
*94	7	7	7	7	8	D3873-1	BUSHING
94A			1	1		D3873-1	BUSHING <sup>3</sup>
*95	1	1	1	1	1	D4171-1	BUSHING <sup>4</sup>
*96	4	4	4	4	4	D4170-1	SPACER
*97	1	1	1	1	1	AN3C34A	BOLT
*98	2	2	2	2	2	AN960C10	WASHER (OR NAS1149CO363R)
*99	1	1	1	1	1	MS21043-3	NUT

\* PART OF D4168-041/-042/-043/-044

\*\* TO BE SUPPLIED BY CUSTOMER

\*\*\* ONLY INSTALLED IF INSTALLING AN APICAL FLOAT SYSTEM

<sup>1</sup> QTY USED MAY BE LESS ON SKIDTUBES WITH APICAL CYLINDRICAL OR TRI-BAG FLOATS<sup>2</sup> HARDWARE USED ON THE SKIDTUBES INSTALLED WITH APICAL CYLINDRICAL BAG FLOATS<sup>3</sup> HARDWARE USED ON THE SKIDTUBES INSTALLED WITH APICAL TRI-BAG FLOATS<sup>4</sup> HARDWARE NOT USED ON THE SKIDTUBES INSTALLED WITH APICAL TRI-BAG FLOATS

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Revision: H

Date: 10.07.26

